

Appl No.: 10/699,488
Reply to Office Action mailed February 21, 2008

Att. Dkt. No:
UCF-294DIV

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 7 (Canceled).

Claim 8 (Currently Amended). An electrochemical deposition apparatus for producing carbon nanoparticles comprising the components of:

(a) a container having a closed bottom portion and an open top portion, suitable for housing an electrochemical bath of an organic solution a liquid hydrocarbon selected from at least one of methanol, and benzyl alcohol and mixtures thereof disposed between two electrodes;

(b) ~~[[an]]~~ a silicon wafer anode and a silicon wafer cathode each coated with catalytic nanoparticles of iron and nickel, wherein the anode and cathode are spaced apart and positioned in the bottom portion of the container as the two electrodes in a plurality of electrodes in said container; and

(c) a magnetic stirrer for agitating the liquid hydrocarbon in the container; and

(d) ~~[[e]]~~ a power supply with an ammeter and a voltmeter connected between the anode and the cathode for imposing a direct current potential of approximately 1000 volts between said the two electrodes to grow and deposit carbon nanoparticles from the organic solution under ambient conditions, on the electrodes in the electrochemical bath; and providing a current density of approximately 12 milliamps per square centimeter between said the two electrodes for a time sufficient that carbon nanoparticles are deposited on said the two electrodes, wherein each of the carbon nanoparticles includes:

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a nanotube produced from the organic solution under ambient conditions having a diameter ranging from approximately 50 nm to approximately 100 nm and a length ranging from approximately 2 nm to approximately 50 μ m.

Claims 9 - 17 (Canceled).

Claim 18 (New). The apparatus of Claim 8, wherein the container for housing the liquid hydrocarbon is made of at least one of glass or ceramic material.

Claim 19 (New). The apparatus of Claim 8, wherein the plurality of electrodes further includes a reference electrode to monitor the electrochemical activity in the container.